Application No. 09/929,737 Amendment B dated June 27, 2006 Reply to Office Action mailed February 27, 2006

# **Amendments to the Drawings:**

The attached sheet of drawings includes changes to Figure 2. This sheet, which includes Figure 2, replaces the original sheet including Figure 2. In Figure 2, previously omitted elements 131 and 132 have been added.

Attachment:

Replacement Sheet

Annotated Sheet Showing Changes

#### **REMARKS**

The present Amendment is in response to the Examiner's Office Action mailed February 27, 2006. Claim 42 is cancelled, claims 4, 7, 8, 17, 18, 26, and 34 are amended, and no new claims have been added. Claims 1-41 and 43-46 are now pending in view of the aforementioned cancellation.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

# I. General Considerations

Applicant notes that the remarks and amendments presented herein have been made merely to clarify the claimed embodiments from elements purported by the Examiner to be taught by the cited references. Such remarks, or a lack of remarks, and amendments are not intended to constitute, and should not be construed as, an acquiescence, on the part of the Applicant: as to the purported teachings or prior art status of the cited references; as to the characterization of the cited references advanced by the Examiner; or as to any other assertions, allegations or characterizations made by the Examiner at any time in this case. Applicant reserves the right to challenge the purported teaching and prior art status of the cited references at any appropriate time.

In addition, the remarks herein do not constitute, nor are they intended to be, an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed herein are presented solely by way of example. Consistent with the foregoing, the discussion herein is not intended, and should not be construed, to prejudice or foreclose contemporaneous or future consideration, by the Applicant, of additional or alternative distinctions between the claims of the present application and the references cited by the Examiner, and/or the merits of additional or alternative arguments.

# II. Amended Drawings

The Office Action in Section 2 objects to the drawings under 37 C.F.R § 1.83 (a) as failing to show every feature of the claims. Specifically, the Office Action alleges that the "LED

based transmitters" of claims 1, 15, 25, 42, and 43 and the "filtering components for coupling to the optical source" of claims 4, 7, 8, 17, 18, 26, and 34 are not illustrated in the existing figures.

In response, Applicant has amended Figure 2 to include a laser based transceiver 132 and a LED based transceiver 131. These elements are supported at least by page 2, lines 21-28 and page 11, lines 20-28 of the specification. As mentioned above, Applicant has included a red lined version of Figure 2 showing the amendments to the figure. Applicant believes that no new matter has been added.

In addition, Applicant has amended claims 4, 7, 8, 17, 18, 26, and 34 to remove "filtering components for coupling to the optical source." Accordingly, Applicant submits that the objections to the drawings in light of claims 4, 7, 8, 17, 18, 26, and 34 is now moot.

#### III. Specification

Applicant has amended the specification as noted above. In particular, the specification has been amended to comport with amended Figure 2. As noted, previously, the amendments to the specification are supported at least by page 2, lines 21-28 and page 11, lines 20-28 of the specification.

#### IV. 35 U.S.C. § 112, First Paragraph (Written Description)

Sections 3 and 4 of the Office Action reject claims 1-24 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. In particular, the Office Action alleges claims 1 and 15 recite operating modes not described in the specification in manner that shows Applicant was in possession of the invention at the time the pending application was filed. Applicant respectfully traverses this rejection.

As an initial matter, Applicant notes that the operating modes as recited in claims 1 and 15 are described in at least page 2, lines 21-28, page 11, lines 20-28, and page 12, lines 4 and 5 of the specification and in Figure 2. For example, page 2, lines 21-28 states "A multilevel and multirate transceiver module has been designed that can operate at multiple transmitter and receiver power ranges which are selected in accordance with an input signal. In an embodiment, the transceiver module operates at two distinct levels: (1) from -3 dBm to -9 dBm, and (2) -9

dBm to -15 dBm. In this manner, the transceiver module of the present invention interoperates with other transceiver modules such as GBICs that transmit or receive data over a power range from -3 dBm to -15 dBm. These ranges allow the transceiver module of the present invention to interoperate with modules that utilize laser as well as LED based transmitters and respective receivers." Page 11, lines 20-28 recite very similar language. Page 12, lines 4 and 5 states "optical receiver 208 and amplifier 210 have a plurality of operating modes."

As noted in the Office Action, these passages provide a description of the relationship between the first operating mode and the LED and between the second operating mode and the laser. Further, these sections describe that the optical transceiver of the pending application is configured to interoperate with a different transceiver that has an LED receiver and transmitter and/or a different transceiver that has a laser receiver and transmitter. In view of this clear disclosure, it would be readily apparent to one skilled in the art that Applicant was in possession of the claimed subject matter. Accordingly, this rejection should be withdrawn.

# V. 35 U.S.C. § 112, First Paragraph (Enablement)

Sections 3 and 5 of the Office Action reject claims 1-46 under 35 U.S.C. § 112, first paragraph as purportedly failing to comply with the enablement requirement. As an initial matter, Applicant respectfully notes that the rejections of claims 4, 7, 17, 18, and 34 for reciting control signals to an optical source under this section is now moot in light of the amendments herein made to these claims. Accordingly, Applicant asks that this rejection for claims 4, 7, 17, 18, and 34 and for the claims that depend on claim 34 for this cause should be removed.

Turning to claims 1-33 and 43-45, the Office Action asserts that claims 1, 15, 25, and 43 recite subject matter that was not sufficiently described in the specification as to enable one skilled in the art to make and/or use the invention. Applicant respectfully disagrees. For at least the reasons outlined below, Applicant respectfully submits that the Examiner has failed to establish that the specification would not enable one of skill in the art to practice the claimed invention without undue experimentation.

Specifically, Applicant notes at the outset that the Examiner has failed to properly state the test for enablement. Particularly, the test for enablement is <u>not</u>, contrary to the assertion of the Examiner, simply whether the claimed invention was "described in the specification in such a way as to enable one skilled in the art ... to make and/or use the invention." Rather, it is well

established that "The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable? That standard is still the one to be applied. *In Re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). *MPEP § 2164.01*. *Emphasis added*. In light of the foregoing, Applicant respectfully submits that the enablement test articulated by the Examiner is inconsistent with longstanding U.S. Supreme Court and Federal Circuit precedent.

Applicant notes, moreover, that a determination that "undue experimentation" would have been needed to make and use the claimed invention is <u>not</u> easily reached. Particularly, the examination guidelines provide that "there are *many* factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any experimentation is 'undue.' <u>These factors include</u>, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure."

MPEP § 2164.01(a). Emphasis added. In connection with the foregoing, the examination guidelines further provide that "It is improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors while ignoring one or more of the others. The examiner's analysis must consider all the evidence related to each of these factors, and any conclusion of nonenablement must be based on the evidence as a whole. Id. Emphasis added.

As to the aforementioned factors, the examination guidelines explain that "The determination that 'undue experimentation' would have been needed to make and use the

claimed invention is <u>not</u> a single, simple factual determination. Rather, it is a conclusion reached by weighing <u>all</u> the above noted factual considerations." *Id. Emphasis added*.

As the foregoing makes clear, the Examiner has not only failed to properly state the test for enablement, but the Examiner has likewise failed to address the issue of undue experimentation as such is contemplated by the enablement test. Applicant respectfully submits that the aforementioned deficiencies are fatal to the rejection posed by the Examiner under 35 U.S.C. § 112, first paragraph.

Finally, inasmuch as the Examiner has provided no evidence or analysis whatsoever concerning the purported lack of enablement regarding claims 1-33 and 43-45, and has instead simply provided a conclusory statement that the claims fail to comply with the enablement requirement, it appears that the Examiner is relying on personal knowledge as a basis for rejecting claims 1-33 and 43-46. In view of the foregoing, and pursuant to 37 C.F.R. 1.104(d)(2), Applicant hereby respectfully requests an Examiner affidavit that: (i) specifically identifies any and all reference(s), other than those that have been specifically cited by the Examiner, upon which the rejection of claims 1-33 and 43-45 is based; and (ii) provides complete details concerning the reasoning and analysis of the Examiner concerning those references as those references are purported to apply to the rejection of claims 1-33 and 43-45.

For at least the reasons set forth above, Applicant respectfully submits that the rejection of claims 1-33 and 43-45 under 35 U.S.C. § 112, first paragraph should be withdrawn.

## VI. Rejection Under 35 U.S.C. § 112, Second Paragraph

Sections 6 and 7 rejects claims 34-42 and 46 under 35 U.S.C. § 112, Second Paragraph for indefiniteness. Applicant notes that this rejection is overcome in light of the amendment herein made to claim 34, from which claims 35-42 and 46 depend, and respectfully asks that this rejection be withdrawn.

Further, the Examiner has failed to identify which part of claim 46 is allegedly indefinite. Therefore, this rejection should be withdrawn.

# VII. Rejection of Claims 1-3, 6, 9, 10, 13-16, 19, 20, 23-25, 27-33 and 46 under 35 U.S.C. § 102(e)

Applicant respectfully notes that a claim is anticipated under 35 U.S.C. § 102(a), (b), or (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Further, the identical invention must be shown in as complete detail as is contained in the claim. Finally, the elements must be arranged as required by the claim. MPEP § 2131.

Sections 8 and 9 of the Office Action reject claims 1-3, 6, 9, 10, 13-16, 19, 20, 23-25, and 27-33 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2002/0149821 to Aronson et al. ("Aronson"). Applicant respectfully disagrees and submits that for at least the reasons outlined below, the rejection of those claims should be withdrawn. Particularly, independent claims 1 and 15 recite that "the optical detector has first and second operating modes such that in the first operating mode, the optical detector is configured to operate in connection with LED-generated optical signals, and in the second operating mode, the optical detector is configured to operate in connection with laser-generated optical signals." Emphasis added. Additionally, claim 25, and claims 43-45, each recite that "the optoelectronic transceiver capable of interoperating with a first other transceiver utilizing laser based transmitters and respective receivers and the optoelectronic transceiver also capable of interoperating with a second other transceiver utilizing LED based transmitters and respective receivers."

Applicant respectfully points out that the Office Action has at least failed to provide a citation to *Aronson* that showing an LED. Inasmuch as the Office Action has not established that the <u>identical</u> invention is taught or suggested in *Aronson* in as complete detail as is contained in claims 1, 15, and 25, and because the Office Action has not shown that *Aronson* discloses the elements of claims 1, 15, and 25 <u>arranged as required by those claims</u>, Applicant respectfully submits that the Examiner has not established that *Aronson* anticipates claims 1, 15, and 25. For at least the foregoing reasons, Applicant respectfully submits that the rejection of claims 1, 15, and 25, as well as the rejection of corresponding dependent claims 2, 3, 6, 9, 10, 13, 14, 16, 19, 20, 23, 24, and 27-33, should be withdrawn.

<sup>&</sup>lt;sup>1</sup> Because Aronson is only citable under 35 U.S.C. § 102(e), Applicant does not admit that Aronson is in fact prior art to the claimed invention but reserves the right to swear behind Aronson if necessary to remove it as a reference.

## VIII. Rejection of Claims 1, 2, 9-15, 19, 20-24, 27, 30, 35 and 38 under 35 U.S.C. § 103(a)

Applicant respectfully notes at the outset that in order to establish a *prima facie* case of obviousness, it is the burden of the Office Action to demonstrate that three criteria are met: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; second, there must be a reasonable expectation of success; and third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP § 2143*.

#### a. claims 1, 2, 9, 10, 11, 13-15, 19, 20, 21, 23, 24, 27 and 35

Sections 10 and 11 of the Office Action reject claims 1, 2, 9, 10, 11, 13-15, 19, 20, 21, 23, 24, 27 and 35 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,629,638 to Sanchez ("Sanchez") in view of U.S. Patent No. 6,554,492 to Gilliland et al. ("Gilliland"). Applicant respectfully disagrees and submits that for at least the reasons outlined below, the rejection of those claims should be withdrawn.

As discussed at VII. above, independent claims 1 and 15 recite that "the optical detector has first and second operating modes such that in the first operating mode, the optical detector is configured to operate in connection with <u>LED-generated optical signals</u>, and in the second operating mode, the optical detector is configured to operate in connection with <u>laser-generated optical signals</u>." *Emphasis added*. Additionally, claim 25 recites that "the optoelectronic transceiver capable of interoperating with a first other transceiver utilizing laser based transmitters and respective receivers and the optoelectronic transceiver also capable of interoperating with a second other transceiver utilizing LED based transmitters and respective receivers."

However, the Office Action has not asserted, much less established that either Sanchez or Gilliland teaches, or even suggests, such an arrangement. For example, Applicant respectfully points out that the Office Action has at least failed to provide a citation to either Sanchez or Gilliland that showing an LED. Thus, even if the purported teachings of Sanchez and Gilliland are combined in the allegedly obvious fashion advanced by the Office Action, the resulting combination fails to include all the limitations of claims 1, 15, and 25.

By virtue of their dependence from one of independent claims 1, 15 and 25, dependent claims 2, 9, 10, 11, 13, 14, 19, 20, 21, 23, 24, and 27 also include all of the limitations of the corresponding independent claim. Thus, even if *Sanchez* is modified by *Gilliland* in the purportedly obvious fashion advanced by the Office Action, the resulting combinations nonetheless fail to include all the limitations of those dependent claims.

For at least the foregoing reasons, Applicant respectfully submits that the Office Action has failed to establish a *prima facie* case of obviousness with respect to claims 1, 2, 9, 10, 11, 13-15, 19, 20, 21, 23, 24, 27, and 35, and the rejection of those claims should accordingly be withdrawn.

#### b. claims 12, 22, 30 and 38

Sections 10 and 12 of the Office Action reject claims 12, 22, 30 and 38 under 35 U.S.C. § 103 as being unpatentable over *Sanchez* in view of *Gilliland* and further in view of U.S. Patent No. 5,680,060 to Banniza et al. ("*Banniza*"). Applicant respectfully disagrees and submits that for at least the reasons outlined below, the rejection of those claims should be withdrawn.

As discussed at VIII.a., the Examiner has not established that either Sanchez or Gilliland teaches, or even suggests, any of the arrangements recited in independent claims 1, 15, or 25. Moreover, it appears that the Examiner has cited Banniza simply to show a digital to analog converter comprising a transistor. This purported disclosure does not cure the deficiencies of Sanchez and Gilliland, discussed previously. Thus, even if Sanchez is modified by Gilliland and Banniza in the purportedly obvious fashion advanced by the Office Action, the resulting combinations fail to include all the limitations of the claims 1, 15, or 25.

By virtue of their dependence from one of independent claims 1, 15 and 25, dependent claims 12, 22, and 30 also include all of the limitations of the corresponding independent claim. Thus, even if *Sanchez* is modified by *Gilliland* and *Banniza* in the purportedly obvious fashion advanced by the Office Action, the resulting combination also fails to include all the limitations of those dependent claims.

For at least the foregoing reasons, Applicant respectfully submits that the Office Action has failed to establish a *prima facie* case of obviousness with respect to claims 12, 22, 30, and 38, and the rejection of those claims should accordingly be withdrawn.

#### c. claims 4, 5, 7, 8, 17, 18, 26, 34-42, and 46

Sections 10 and 13 of the Office Action reject claims 4, 5, 7, 8, 17, 18, 26, 34-42, and 46 under 35 U.S.C. § 103 as being unpatentable over *Sanchez* in view of *Gilliland* and further in view of U.S. Patent No. 6,554,492 to Ewen et al. ("*Ewen*"). Applicant respectfully disagrees and submits that for at least the reasons outlined below, the rejection of those claims should be withdrawn.

As discussed at VIII.a., the Office Action has not established that either Sanchez or Gilliland teaches, or even suggests, any of the arrangements recited in independent claims 1, 15, 25 or 34. Moreover, it appears that the Office Action has cited Ewen simply to show a receiver with a filtering network. This purported disclosure does not cure the deficiencies of Sanchez and Gilliland, discussed previously. Thus, even if Sanchez is modified by Gilliland and Ewen in the purportedly obvious fashion advanced by the Office Action, the resulting combinations fail to include all the limitations of the claims 1, 15, 25 or 34.

By virtue of their dependence from one of independent claims 1, 15, 25, and 34, dependent claims 4, 5, 7, 8, 17, 18, 26, 35-41, and 46 also include all of the limitations of the corresponding independent claim. Thus, even if *Sanchez* is modified by *Gilliland* and *Ewen* in the purportedly obvious fashion advanced by the Office Action, the resulting combination also fails to include all the limitations of those dependent claims.

For at least the foregoing reasons, Applicant respectfully submits that the Office Action has failed to establish a *prima facie* case of obviousness with respect to claims 4, 5, 7, 8, 17, 18, 26, 35-41, and 46, and the rejection of those claims should accordingly be withdrawn.

#### CONCLUSION

In view of the foregoing, Applicant believes the claims as amended or presently pending are in allowable form and that every issue raised by the Office Action has been addressed. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Application No. 09/929,737 Amendment B dated June 27, 2006 Reply to Office Action mailed February 27, 2006

Dated this 27<sup>th</sup> day of June, 2006.

Respectfully submitted,

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ELM:SKJ W:\15436\253.31\ML0000003401V001.doc Title: MULTI-RATE AND MULTI-LEVEL GIGABIT INTERFACE CONVERTER

Inventor: Andreas Weber

Serial No.: 09/929,737 Filing Date: 08/13/2001 ANNOTATED SHEET Docket No.: 15436.253.31

